Gary A. Dodge, #0897
HATCH, JAMES & DODGE
10 West Broadway, Suite 400
Salt Lake City, UT 84101
Telephone: 801-363-6363
Facsimile: 801-363-6666
Email: gdodge@hjdlaw.com
Attorneys for UAE and CIMA

Damon E. Xenopoulos
STONE MATTHEIS XENOPOULOS & BREW, PC
1025 Thomas Jefferson Street, N.W.
800 West Tower
Washington, D.C. 20007
Telephone: (202) 342-0800
Facsimile: (202) 342-0807
Email: dex@smxblaw.com

Jeremy R. Cook, #10325
COHNE KINGHORN, P.C.
111 East Broadway, 11th Floor
Salt Lake City, UT 84111
Telephone: (801) 363-4300
Facsimile: (801) 363-4378
Email: jcook@cohnekinghorn.com
Attorneys for Nucor Steel-Utah

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Questar Gas Company to Make Tariff Modifications To Charge Transportation Customers for Supplier Non-Gas Services	Docket No. 14-057-31

PREFILED DIRECT TESTIMONY AND EXHIBITS OF KEVIN C. HIGGINS

The Utah Association of Energy Users, Nucor Steel-Utah, and CIMA ENERGY LTD hereby submit the Prefiled Direct Testimony and Exhibits of Kevin C. Higgins in this docket.

DATED this 5th day of May 2015.

HATCH, JAMES & DODGE

/s/ _____
Gary A. Dodge

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by email this 5th day of May 2015 on the following:

Questar Gas Company:

Colleen Larkin Bell	colleen.bell@questar.com
Jenniffer Nelson Clark	jennifer.clark@questar.com
Barrie McKay	barrie.mckay@questar.com
Kelly Mendenhall	kelly.mendenhall@questar.com

Division of Public Utilities:

Patricia Schmid	pschmid@utah.gov
Justin Jetter	jjetter@utah.gov
Chris Parker	chrisparker@utah.gov
Artie Powell	wpowell@utah.gov

Office of Consumer Services:

Rex Olsen	rolsen@utah.gov
Michele Beck	mbeck@utah.gov
Danny Martinez	dannymartinez@utah.gov

UAE:

Gary Dodge	gdodge@hjdlaw.com
Kevin Higgins	khiggins@energystrat.com
Neal Townsend	ntownsend@energystrat.com
Jeff Fishman	jfishman@energystrat.com

Summit Energy:

Larry R. Williams	larry@thesummitcompanies.com
Mike McGarvey	mike@summitcorp.net

Nucor Steel:

Damon E. Xenopoulos	dex@smxblaw.com
Jeremy R. Cook	jcook@cohnekinghorn.com

Kroger:

Kurt J. Boehm	kboehm@BKLlawfirm.com
Jody Kyler Cohn	jkylercohn@BKLlawfirm.com
Richard A. Baudino	rbaudino@jkenn.com

CIMA:

Matt Medura	mjm@cima-energy.com

US Magnesium:

Roger Swenson	roger.swenson@prodigy.net

/s/ _____

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

Direct Testimony of

KEVIN C. HIGGINS

On behalf of

Utah Association of Energy Users,

Nucor Steel-Utah, and

CIMA ENERGY LTD

Docket No. 14-057-31

May 5, 2015

I. INTRODUCTION AND SUMMARY

Q. Please state your name and business address.

A. My name is Kevin C. Higgins. My business address is 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. On whose behalf are you testifying in this proceeding?

A. My testimony is being sponsored by the Utah Association of Energy Users ("UAE"), Nucor Steel-Utah ("Nucor"), and CIMA ENERGY LTD ("CIMA").

Q. Please summarize your qualifications.

A. My academic background is in economics, and I have completed all coursework and field examinations toward a Ph.D. in Economics at the University of Utah. In addition, I have served on the adjunct faculties of both the University of Utah and Westminster College, where I taught undergraduate and graduate courses in economics. I joined Energy Strategies in 1995, where I assist private and public sector clients in the areas of energy-related economic and policy analysis, including evaluation of electric and gas utility rate matters.

Prior to joining Energy Strategies, I held policy positions in state and local government. From 1983 to 1990, I was economist, then assistant director, for the Utah Energy Office, where I helped develop and implement state energy policy. From 1991 to

1994, I was chief of staff to the chairman of the Salt Lake County Commission, where I was responsible for development and implementation of a broad spectrum of public policy at the local government level.

Q. Have you previously testified before the Utah Public Service Commission ("Commission")?

A. Yes. Since 1984, I have testified in thirty-five dockets before the Utah Public Service Commission on electricity and natural gas matters.

Q. Have you testified previously before any other state utility regulatory commissions?

A. Yes, I have testified in approximately 165 other proceedings on the subjects of utility rates and regulatory policy before state utility regulators in Alaska, Arkansas, Arizona, Colorado, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nevada, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Virginia, Washington, West Virginia, and Wyoming. I have also filed affidavits in proceedings before the Federal Energy Regulatory Commission.

Q. What is the purpose of your testimony?

A. My testimony addresses the proposal by Questar Gas Company ("QGC" or "Company") to introduce new charges to retail transportation customers.

Q. Please summarize your primary conclusions and recommendations.

A. I offer the following primary conclusions and recommendations:

- As a threshold matter, QGC's proposal to introduce a daily Transportation Imbalance Charge is premature, incompletely developed, and unreasonably

disruptive to the marketplace efficiencies that have been developed to help Utah businesses manage their gas supplies. The alleged problem that QGC is seeking to address has not previously been recognized as a significant concern in Utah, nor does it appear to be acknowledged to be a matter of concern in the tariffs of most other gas utilities in the United States. In light of these considerations, I recommend that the proposal be rejected by the Commission. If the Commission is interested in considering the imposition of a daily Transportation Imbalance Charge, I recommend that prior to adopting any charge or adopting the rate design proposed by QGC, the Commission sponsor a workshop process to investigate how daily balancing could best be accomplished, taking into account the full suite of market participants and the opportunities for using market mechanisms to manage daily imbalances.

- My previous recommendations notwithstanding, if a daily balancing charge is to be imposed on transportation customers at this time, then the charge proposed by QGC should be rejected because it is not reasonable. Both the Transportation component and QPC Fuel Reimbursement component proposed by QPC should be removed from the calculation because QGC has failed to demonstrate that any costs are actually being incurred in these categories as a result of retail transportation customer imbalances. Further, net transportation customer imbalances that are within 5% of the aggregate transportation customer usage on a given day should be excluded from the cost of the total daily transportation imbalance to recognize that the pipeline system has inherent flexibility to

accommodate small daily imbalances. In addition, the calculation should take account of the reduction in storage activity that results when the transportation customer imbalance and the QGC sales service imbalance move in opposite directions on a given day. Incorporating these adjustments results in a Transportation Imbalance Charge of $0.03695/Dth on imbalances in excess of the proposed 5% tolerance limit rather than the $0.19064/Dth charge proposed by QGC.

II. DESCRIPTION OF QGC PROPOSAL

Q. What modification is QGC proposing to make to its tariff?

A. As described in the direct testimony of Kelly B. Mendenhall, QGC is proposing to introduce a new daily Transportation Imbalance Charge that would be imposed on retail transportation customers to recover the costs for services that QGC alleges these customers use on the system but do not pay for. QGC also maintains that the new charge will provide an incentive for transportation customers and their agents to better match daily nominations to daily usage. Specifically, the Transportation Imbalance Charge proposed by QGC would impose on retail transportation customers a rate of $0.19064/Dth for all deviations between their daily nominations and their daily usage in excess of a 5% tolerance.

Q. What services does QGC allege that transportation customers use but do not pay for?

A. QGC alleges that transportation customers are using upstream transportation, No-Notice Service, and Storage Service, but are not paying for it. The Company's argument is that upstream transportation, No-Notice Service, and Storage Services are required to manage the situation that occurs when the daily gas deliveries (nominations) that are made on behalf of retail transportation customers deviate from the customers' actual daily usage. In short, when daily transportation nominations differ from daily transportation usage, QGC claims it is forced to use the upstream transportation, No-Notice Service, and Storage Service that it purchases on behalf of its sales customers from its affiliate, Questar Pipeline, to accommodate these deviations. The Transportation Imbalance Charge developed by Mr. Mendenhall is intended to compensate QGC and its sales customers for the alleged use of these services.

On page 4 of his direct testimony, Mr. Mendenhall provides an inventory of individual cost components that QGC alleges are applicable to the No-Notice and Storage Services, which I have replicated in Table KCH-1 below.

Table KCH-1
No-Notice Cost Components Alleged by QGC

	Component	Volumetric Rate (per Dth)
1	Transportation	$0.17652
2	No-Notice Transportation	$0.02852
3	ACA Charge	$0.00140
4	QPC Fuel Gas Reimbursement	$0.09124
5	Clay Basin Demand	$0.09381
6	Clay Basin Capacity	$0.02378
7	Clay Basin Fuel Gas Reimbursement	$0.09263
8	Injection/Withdrawal Avg	$0.01415
9	Total Charge	$0.52205

Q. How does QGC calculate the proposed Transportation Imbalance charge?

A. Mr. Mendenhall takes the $0.52205 shown in Table KCH-1 and multiplies it by the sum of absolute net daily imbalances incurred by retail transportation customers during the test period December 1, 2013 through November 30, 2014 (3,333,731 Dth). This produces an imputed cost (or annual revenue requirement) of $1,740,374. Mr. Mendenhall then divides this product by the total daily imbalances incurred by transportation customers in excess of a 5% tolerance band (9,128,985 Dth) to arrive at QGC's recommended Transportation Imbalance Charge of $0.19064/Dth.

III. ASSESSMENT OF QGC PROPOSAL

Threshold Issues

Q. What is your assessment of QGC's proposal?

A. As a threshold matter, I believe the proposal is premature, incompletely developed, and unreasonably disruptive to the marketplace efficiencies that have been developed to help Utah businesses manage their gas supplies. In light of these considerations, I recommend that the Commission reject the Company's proposal. In some respects, the Company's proposal is reminiscent of another QGC proposal in a recent case that would have subjected all interruptible customers to interruption testing irrespective of the economic or environmental consequences of such a requirement. The proposal at hand is similar in its preference for hard-line regulatory tactics and suffers from having the same type of disregard for undue impacts.

Transportation service has been in place in QGC's service territory for over twenty-five years without a provision for daily balancing outside of operational flow orders, known in the QGC tariff as Balancing Restrictions.[1] Indeed, based on my review of utility gas tariffs throughout the West, summarized in UAE Exhibit 1.1 and based, in part, on QGC's discovery responses, the imposition of daily balancing requirements for transportation customers appears to be quite rare. I have only been able to find one utility in the western United States, Southwest Gas, that requires daily balancing – and its requirement accommodates a 25% imbalance tolerance as opposed to the 5% tolerance proposed by QGC. In a data response, QGC identified two other utilities that apparently impose a daily balancing requirement or imbalance charge, one of which is located in Maryland (Baltimore Gas & Electric) and the other of which is located in Indiana (Vectren).[2] In the case of the former, Baltimore Gas & Electric charges $0.005/Dth to *suppliers* to recover daily balancing costs. It is thus very distinct from the QGC proposal, which is attempting to charge the retail transportation *customers*. In the case of Vectren, the daily tolerance is 15%, and the charge is based on the cashing-out of the commodity rather than for the no-notice service as proposed by QGC.

In short, the alleged "problem" that QGC is seeking to address has not been recognized as a longstanding concern in Utah nor does it appear to be acknowledged to be a matter of concern in the tariffs of most other gas utilities in the United States. The small handful of utilities that do address this issue either provide for daily imbalance

[1] For a discussion of Balancing Restrictions in the context of this proceeding, please see the direct testimony of Jeff Fishman.
[2] See QGC's Response to UAE Data Request 2.07, which is included in UAE Exhibit 1.2.

tolerances that are three to five times greater than QGC is proposing or else direct the charge to suppliers instead of customers. The Commission should recognize that, by industry standards, QGC's approach appears to be a singularly aggressive outlier.

Q. Do you have concerns regarding the QGC proposal beyond these threshold matters?

A. Yes. If, despite its lack of ripeness or the presentation of a convincing case that it is necessary, a daily balancing charge is nevertheless imposed on transportation customers, then the charge proposed by QGC should be rejected because it is not reasonable. I will address the calculation of the proposed charge in detail later in my testimony.

Q. Returning to the threshold issues you have identified, why do you maintain that the QGC proposal is premature?

A. The current transportation service operating framework in Utah is based on a model in which transportation customers are expected to balance nominations and usage within a tolerance band on a *monthly* basis. Indeed, *monthly* balancing is the standard applied across the country. The current Utah model has developed to allow parties to offset positive and negative monthly imbalances among customers and suppliers, efficiently enlisting the marketplace and supplier expertise and administrative resources to accomplish the goal of keeping customers within the specified monthly tolerance bands. This approach has worked well, by virtually all accounts, for decades, both in Utah and throughout the United States.

QGC has filed its proposal for a *daily* Transportation Imbalance Charge and a target revenue requirement of $1.7 million against this backdrop of a *monthly* balancing

regime, and is asserting that the historical test year data that was produced from last year's monthly balancing regime constitutes a proper basis for assigning responsibility for daily balancing costs going forward. I disagree. The daily nomination patterns in the historical test year naturally reflect the monthly balancing regime that has been in place through the current day. Before a revenue requirement for a new daily imbalance charge can reasonably be determined, transportation customers and suppliers should at least be given reasonable advance notice that a cost for daily imbalances will be imputed for recovery through a future daily imbalance charge. Such notice would at least provide customers and suppliers the opportunity to retool their practices insofar the daily nominating practice is concerned.

Q. Why do you maintain that QGC's proposal is incompletely developed?

A. The sole ingredient in QGC's proposal is a new charge. Whereas the monthly balancing regime has evolved to accommodate a number of practices to allow for the management and elimination of imbalances through aggregation of customer imbalances by suppliers and the trading of imbalances among parties, the new QGC proposal offers no scope for any such management mechanisms. Indeed, by assigning daily imbalance costs directly to individual customers (rather than to suppliers), QGC's approach appears likely to thwart the efficient use of aggregation and trading as a means of managing daily imbalances, and thus would be unreasonably disruptive to the marketplace efficiencies that have been developed in the Utah market and throughout the country. In contrast, a well thought out proposal would contemplate how the other critical market players (e.g., suppliers) could play a meaningful role in managing daily imbalances, as they do today in

managing monthly imbalances and even daily imbalances during periods of daily restrictions. If the Commission considers imposing a daily Transportation Imbalance Charge despite the absence of any showing of the need for the same, I recommend that, prior to adopting any charge or adopting a rate design, the Commission sponsor a workshop process to investigate how daily balancing could best be accomplished, taking into account the full suite of market participants and the opportunities for using market mechanisms to manage daily imbalances.

Moreover, as discussed by Mr. Fishman, QGC is unprepared to provide customers with data that is necessary and useful for managing imbalances on an everyday basis. This is a further indication that the Company's proposal is premature and incompletely developed.

Transportation Imbalance Charge

Q. Aside from the threshold issues you have identified, please explain why you believe the specific charge proposed by QGC is unreasonable.

A. There are several problems with the proposed charge. But prior to addressing these problems, it is important to recognize at the outset that the fundamental exercise that QGC has undertaken in this filing is one of assigning to transportation customers certain fixed costs that QGC has contracted to pay its affiliate Questar Pipeline Company ("QPC") for services provided on behalf of QGC's *sales* customers. That is, the costs at issue are costs that QGC is incurring irrespective of transportation service and that it would incur even if there were no transportation customers. Little or none of these costs

represent incremental costs that transportation customers are causing QGC to incur. In short, QGC incurs these costs anyway, but because there is an alleged service also being provided to transportation customers, QGC seeks to allocate and recover a portion of its fixed costs from the transportation class. To put the proposed charge into perspective, the $1.7 million revenue requirement proposed by QGC for this new charge would be an 11.6% increase when applied to the $15 million combined TS/FT-1 Step 2 DNG revenue requirement determined in the QGC depreciation docket that followed its most recent general rate case. It would clearly be a material increase in rates.

Q. Do you have any observations concerning the cost components that QGC has included in the proposed Transportation Imbalance Charge?

A. Yes. Based on my review of discovery in this case I have concluded that the Transportation cost component of $0.17652/Dth (see Table KCH-1) and its associated fuel cost of $0.09124/Dth should both be removed from the calculation. These proposed charges are based on QPC's T-2 Interruptible Transportation rate. There is no evidence that this incremental transportation cost is actually incurred by QGC as a consequence of transportation customer daily imbalances. Indeed, the evidence demonstrates to the contrary.

Aside from a reference to QGC's "upstream transportation" in Mr. Mendenhall's direct testimony, the premise behind the inclusion of these costs is not explained in QGC's filing, but it appears to be based on the illustrative diagrams in QGC Exhibit 1.1. The diagram on page 1 of that exhibit is purported to depict the situation that occurs when transportation customers deliver more gas to the QGC system than they collectively

consume on a given day, resulting in a positive imbalance. According to the diagram and accompanying explanation, when transportation customers have a positive daily imbalance, QGC must somehow "deliver" this excess gas through an apparent backhaul on the QPC system to be injected into storage at Clay Basin. This implicit backhaul apparently gives rise to the QPC Transportation cost component that QGC is seeking to assign to transportation customers as part of the Transportation Imbalance Charge.

Q. Do these implied backhauls actually occur?

A. No. The discovery in this case demonstrates that these implied backhauls do not actually occur. Nor does the discovery indicate that any transportation service is actually utilized as a result of the imbalances, other than the distinct and separately-priced No-Notice Transportation service. Consider QGC's Response to UAE Data Request 2.05:[3]

Question:

a. Is it QGC's contention that whenever transportation customers collectively consume less gas than they nominate on QPC (causing a positive daily imbalance) that QGC then schedules delivery of the imbalance gas from the City Gate to Clay Basin?

Answer: No.

Question:

d. If the answer to part (a) of this question is no, please explain in detail the mechanics of the steps that QGC undertakes when transportation customers collectively consume less gas than they nominate on QPC.

Answer:

When transportation customers collectively consume less gas than they nominate, the differences results in a no-notice adjustment to QGC's injection or withdrawal

[3] QGC's Response to UAE Data Request 2.05 is provided in UAE Exhibit 1.2.

> nomination at Clay Basin. QGC does not schedule delivery of the imbalance gas as suggested in part a. This happens because the volume of gas that flows through the city gate is dictated by the total actual demand on the Questar Gas system. However, all of the gas nominated for those customers shows up at the city gate regardless of their demand. This therefore reduces the amount of gas received at the city gate for QGC sales customer. Reduced volume through the city gate for QGC sales customers will either reduce the amount of withdrawal from Clay Basin or increase the amount of injection at Clay Basin through the use of no-notice transportation.

As this data response plainly states, QGC does not schedule gas deliveries from the QGC City Gate to Clay Basin in response to excess gas deliveries, and thus does not incur any transportation costs relating to the same. Rather, the excess is managed upstream at Clay Basin. According to the response, excess deliveries are managed either through increased injections or fewer withdrawals at Clay Basin. There is no backhaul from the City Gate to Clay Basin, and thus no additional QPC transportation charge (and associated fuel cost) is incurred to deliver transportation customer gas to Clay Basin. Nor does the data response identify any other upstream transportation activity or costs aside from no-notice adjustments to injection or withdrawal nominations at Clay Basin. In particular, there is no mention of QPC's interruptible transportation service (T-2). If anything, there appears to be an *avoidance* of QPC transportation service utilized by QGC as the excess deliveries from transportation customers necessarily result in less gas being delivered by QPC to the City Gate to meet the needs of QGC's sales service customers, as these customers are consuming the excess gas being delivered by the transportation customers in this situation.

As I stated above, the service that *does* appear to be utilized according to this data response is the QPC No-Notice Transportation service, the costs of which I have retained in the calculation of the Transportation Imbalance Charge. According to QPC's tariff, No-Notice Transportation service must be taken in conjunction with QPC's Firm Transportation rate (T-1), which is priced as a monthly reservation charge (i.e., not on a volumetric basis). So it appears that one of QGC's objectives in designing the proposed charge is to assign to transportation customers a share of the firm transportation costs that QGC incurs anyway to serve its sales customers – even when transportation customer positive imbalances result in *less* gas being transported to the City Gate to serve QGC sales customers.

Q. What about the situation in which transportation customers collectively under-deliver gas to the QGC system?

A. This situation is depicted in QGC Exhibit 1.1, page 2, which shows the effects of a collective negative imbalance. This diagram depicts QGC as withdrawing gas from Clay Basin to make up the shortfall (alternatively, QGC could inject less gas into storage, depending on the circumstances). The diagram then shows the negative imbalance gas being transported on the QPC system to the QGC system to meet the transportation customer shortfall.

Q. Does QGC explain the actual mechanics of this situation in a data response?

A. Yes. QGC's Response to UAE Data Request 2.06 provides the following explanation:[4]

Question:

a. Is it QGC's contention that whenever transportation customers collectively consume more gas than they nominate on QPC (causing a negative daily imbalance) that QGC then schedules delivery of an equivalent amount of gas from Clay Basin to the City Gate to make up for the negative imbalance?

Answer: No.

Question:

e. If the answer to part (a) of this question is no, please explain in detail the mechanics of the steps that QGC undertakes when transportation customers collectively consume more gas than they nominate on QPC.

Answer:

When transportation customers collectively consume more gas than they nominate, the differences results in a no-notice adjustment to QGC's injection or withdrawal nomination at Clay Basin. QGC does not schedule delivery from Clay Basin to the City Gate as suggested in part a. This happens because the volume of gas that flows through the City Gate is dictated by the total demand on the Questar Gas system. Since gas nominated for those customers does not meet the total demand, the total amount of gas flowing through the city gas is increased. Increased volume through the City Gate will either increase the amount of withdrawal from Clay Basin or decrease the amount of injection at Clay Basin through the use of no-notice transportation.

Again, there is no mention in the data response of QGC incurring and additional or incremental transportation costs, although the response does indicate that the total amount of gas flowing through the city gate is increased. However, this situation is

[4] QGC's Response to UAE Data Request 2.06 is provided in UAE Exhibit 1.2.

simply the reverse of the decreased flow that occurs when transportation customers consume less gas than they nominate or deliver. And because transportation customers must remain within the monthly tolerance bands (or pay a penalty) the negative daily imbalances represented in QGC Exhibit 1.1, page 1, are routinely offset by balancing schedules that deliver more gas to the QGC system than transportation customers consume. Thus, over the course of the month, the incremental transportation necessary to make up for a transportation customer negative daily imbalance is offset in equal or similar amounts by the transportation avoided when positive daily imbalances or delivery of balancing gas occurs. Therefore, I can see no reasonable basis for charging transportation customers for any transportation costs associated with QGC's daily withdrawal and injection activities at Clay Basin.

Q. What is your recommended adjustment to the calculation of the proposed Transportation Imbalance Charge based on this discussion?

A. Both the Transportation component of $0.17652/Dth and QPC Fuel Reimbursement component of $0.09124/Dth should be removed from the calculation of the proposed Transportation Imbalance Charge. This adjustment produces a unit cost of $0.25429/Dth. This $0.25429/Dth value should replace the $0.52205/Dth unit cost that Mr. Mendenhall used in the numerator of his equation on page 8 of his direct testimony to calculate the proposed Transportation Imbalance Charge.

Q. Do you have any other concerns with the numerator used in Mr. Mendenhall's calculation of the Transportation Imbalance Charge?

A. Yes. I have two concerns with the volume of daily imbalances used in the numerator. First, QGC's approach implicitly assumes that each decatherm of daily imbalance must be injected or withdrawn from storage, whereas it is well understood that pipeline systems have some inherent flexibility to physically absorb excess deliveries or draws without requiring the use of storage. By ignoring this role of "line pack" in accommodating small daily imbalances, QGC is overstating the cost of transportation imbalances. For the purpose of identifying the cost of the total daily transportation imbalance, I believe it is more reasonable to exclude the imbalances that are within 5% of the aggregate transportation customer usage on a given day.

Q. Have you calculated the impact of this adjustment on the volume of imbalances included in the numerator of Mr. Mendenhall's calculation on page 8 of his direct testimony?

A. Yes. I performed this calculation using the data provided in the workpapers QGC used to prepare QGC Exhibit 1.3. On a standalone basis, this adjustment reduces the volume of imbalances from the 3,333,731 Dth per year used by QGC to 1,514,597 Dth per year.

Q. What is your second concern regarding the volume of daily imbalances used in the numerator?

A. My second concern is that Mr. Mendenhall's calculation does not take account of the reduction in storage activity that results when the transportation imbalance and the QGC sales service imbalance move in opposite directions on a given day. That is, there are days in which the QGC sales service imbalance is negative and that of transportation

customers in the aggregate is positive and vice versa. These situations reduce the need for QGC to use storage service.

Q. Have you made an adjustment for such a sales service imbalance offset?

A. Yes. QGC's Response to UAE Data Request 2.04U, UAE Attachment 2.04U,[5] provides the sales service daily imbalances for the historical test year. On days in which the transportation daily imbalance and the sales service daily imbalance moved in opposite directions, and in which the transportation imbalance also was in excess of 5%, I offset the transportation imbalance that exceeded 5% by the amount of the sales service imbalance. However, in doing so, I capped this offset by the amount of transportation imbalance that exceeded 5%. That is, the resulting net imbalance cost assigned to transportation customers for the day was not permitted to fall below zero.

Q. Have you calculated the incremental impact of this adjustment on the adjusted volume of imbalances you presented above?

A. Yes. This adjustment was calculated by combining the data from Attachment UAE 2.04U with the data in QGC's workpapers. This adjustment reduces the volume of transportation imbalances used in the calculation of the revenue requirement from 1,514,597 Dth to 1,326,340 Dth.

Q. Have you calculated the impacts of your adjustments on the proposed Transportation Imbalance charge?

[5] The narrative Responses to UAE Data Request 2.04 and 2.04U are included in Exhibit UAE 1.2.

A. Yes. Inserting my adjustments into the formula presented by Mr. Mendenhall on page 8 of his direct testimony produces a Transportation Imbalance Charge of $0.03695/Dth. This calculation is presented in UAE Exhibit 1.3 and is summarized in the equation below:

$$\frac{\$0.25429/\text{Dth} \times 1{,}326{,}340\ \text{Dth}}{9{,}128{,}985\ \text{Dth}} = \$0.03695/\text{Dth}$$

Q. What is your recommendation to the Commission regarding the amount of the proposed Transportation Imbalance Charge?

A. I recommend QGC's proposal should be rejected for the threshold reasons I discussed above. However, if a Transportation Imbalance Charge is adopted it should be set at the $0.03695/Dth charge calculated above for imbalances in excess of 5%.

Q. Does this conclude your direct testimony?

A. Yes, it does.